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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/525,892	03/15/2000	Alfonso Navarro	660005.98641	9509
26710	7590	06/14/2006	EXAMINER	
QUARLES & BRADY LLP 411 E. WISCONSIN AVENUE SUITE 2040 MILWAUKEE, WI 53202-4497			CHAWLA, JYOTI	
			ART UNIT	PAPER NUMBER
			1761	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/525,892

Applicant(s)

NAVARRO ET AL.

Examiner

Jyoti Chawla

Art Unit

1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4,5,7,16,17 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4,5,7,16,17 and 19-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 22, 2006 has been entered.

Claims 4, 5, 7, 16, 17, 19 -24 remain pending in the present application.

### ***Claim Objections***

Claims 4 and 17 part (a) use the term "gravity" as opposed to specific gravity.

Claims 4 and 17 recite "amount sufficient to give a gravity in the range of from about 2 to about 25 degrees Plato". Correction is required.

### ***Claim Rejections - 35 USC § 103***

Claims 4, 5, 7, 16, 17, 19 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quain (GB 2197341 A) in view of Handbook of Brewing further in view of applicant' own admission (Pages 1-4).

Regarding claims 4 and 17(a-d), Quain teaches a method for brewing beer which includes a method of enhancing yeast fermentation of wort by suspending yeast in a wort-free aqueous solution comprising liquid adjunct (Page 1, lines 26-31 and 43-44; Page 2, line 18 to page 3, line 40); and aerating the suspension for a period of time with

Art Unit: 1761

a gas comprising oxygen to allow oxygen uptake by the yeast required for sterol and unsaturated fatty acid synthesis (Page 1, lines 13-15 and lines 41-42). Quain also teaches transferring the yeast when it reaches maximum oxygenation (Page 2, lines 1-10 and Page 3, lines 40-60) and then fermenting under suitable fermentation conditions to produce beer (Page 3, lines 60-65). Since Quain teaches aqueous solution containing yeast to be aerated, the solution taught by Quain inherently contains nutrients to keep the yeast alive and take up oxygen. An "adjunct" is broadly defined as something that is added, therefore aqueous solution containing nutrients as taught by Quain would constitute liquid adjunct.

Quain is silent regarding the gravity for aeration and pitching however, handbook of Brewing teaches that in order to reduce the lag time and have a rapid start to the fermentation yeast is pitched at a rate between 5-20 million cells/ml, i.e., 5-20 degrees Plato, which falls in the recited range of the applicant. Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to aerate the yeast at a gravity value comparable to the one used for pitching as taught by the Handbook of Brewing in order to regulate the fermentation process and make the resulting product more consistently in lesser amount of time.

Quain is also silent regarding the addition of cereal sugars to the yeast suspension. However Handbook of brewing teaches that among the nutritional requirements of brewer's yeast, the carbohydrate requirement involves use of sugars like sucrose, glucose (dextrose) and fructose (fruit sugar), maltose and maltotriose. Since malted grain is an important ingredient in making the beer wort, maltose and maltotriose

Art Unit: 1761

(malted sugars) would become important sugars in wort and the ability of brewer's yeast to use maltose and maltotriose would be vital to the production of good beer (Page 182-184, Part C). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to add maltose and maltotriose among other sugars like glucose (dextrose) to the aqueous suspension (liquid adjunct) for aerating yeast to provide nutrients for yeast growth and also serve as a feedback of the correct genetic makeup of the brewer's yeast being utilized for fermentation.

Regarding claims 5, Quain is silent regarding addition of zinc to the yeast suspension.

Applicants admit that the prior art has added zinc to yeast fermentations to enhance the fermentation rate (Top of page 3 of the specification). Further, the Handbook of Brewing teaches that addition of zinc to water that is used in brewing processes was known.

Proprietary blended yeast foods containing zinc are used in brewing as aids to reduce problems and have a more consistent fermentation (Pages 216-217). Zinc plays an important role in the protein synthesis and yeast growth and also reduces toxicity of cadmium (Page 143). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to add zinc as part of the aqueous nutrient solution for yeast because it is beneficial to the yeast fermentation rate and as a result shorten the beer making process.

Regarding claim 7, wort taught by Quain is non-aerated wort (Page 1, lines 32-35).

Art Unit: 1761

Regarding claim 16, Quain teaches that the gas is delivered above a maximum oxygen uptake rate of the yeast (Page 1, lines 36-48).

Regarding claim 17 (a) –(d), see the rejection above regarding claim 4.

Regarding claim 17 (e), Quain teaches monitoring the wort for an end of fermentation, wherein the end of fermentation is reached in a shorter time than a fermentation method Wherein aerated wort is pitched with anon-aerated yeast slurry (Page 1, lines 21-31).

Regarding claim 19, Quain teaches using brewer's yeast (Page 1, line 50).

The limitations of claim 20 are the same as the limitations of claim 5. Therefore, regarding claim 20, see the explanation of rejection regarding claim 5.

Regarding claims 21 and 22, Quain teaches suspending yeast in an aqueous medium to oxygenate however is silent regarding the use of maltose, maltotriose and glucose (dextrose) in the adjunct. However, Handbook of brewing teaches that among the nutritional requirements of brewer's yeast, the carbohydrate requirement involves use of sugars like sucrose, glucose (dextrose) and fructose (fruit sugar), maltose and maltotriose (Page 182). As discussed above, maltose and maltotriose (malted sugars) are sugars in malted wort and the ability of brewer's yeast to use the two sugars would be vital to the production of good beer (Page 182-184, Part C). Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to add

Art Unit: 1761

maltose and maltotriose among other sugars like glucose (dextrose) to the aqueous suspension (liquid adjunct) for aerating yeast to provide nutrients for yeast growth and also serve as a feedback of the correct genetic makeup of the brewer's yeast being utilized for fermentation.

The limitations of claims 23 and 24 are the same as the limitations of claims 21 and 22. Therefore, regarding claims 23 and 24, see the explanation of rejection regarding claims 21 and 22.

### ***Response to Arguments***

Applicant's arguments, see Remarks (Page 4, lines 3-10), filed May 22, 2006, with respect to 112 first paragraph have been fully considered and are persuasive. The rejection of claims 4,5,7, 16, 17, 19-24 under 112 first paragraph has been withdrawn.

Applicant's arguments with respect to claims 4, 5, 7, 16, 17, 19 and 20-24 have been considered but are moot in view of the new ground(s) of rejection.

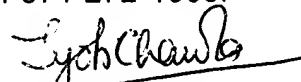
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Chawla whose telephone number is (571) 272-8212. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1761

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jyoti Chawla  
Examiner  
Art Unit 1761

JC



**KEITH HENDRICKS**  
**PRIMARY EXAMINER**